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Structure of heme

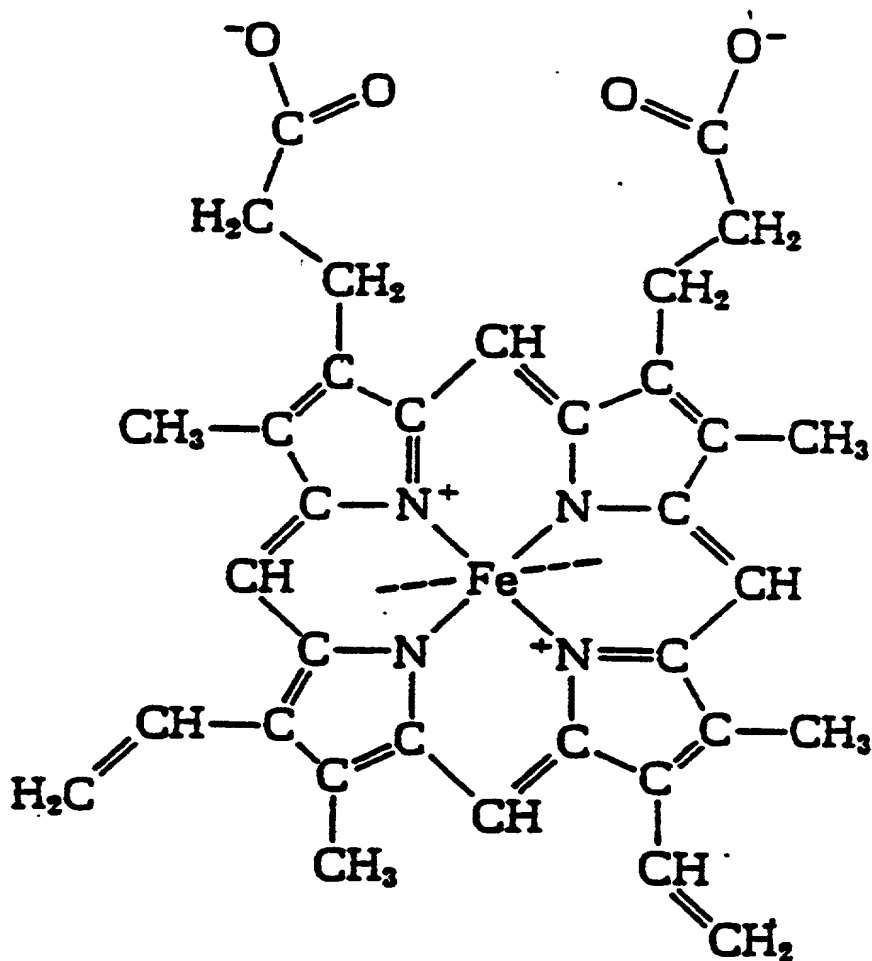


FIGURE 1

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Alpha globin sequence:

1 GTG CTG TCT CCT GGC GAC AAG ACC AAC GTC AAG GGC GGC TGG GGC 45
 Val Leu Ser Pro Ala Asp Lys Thr Asn Val Val Lys Ala Ala Trp Gly

 46 AAG GTT GGC GCG CAC GCT GGC GAG TAT GGT GCG GAG GGC CTG GAG 90
 Lys Val Gly Ala His Ala Gly Glu Tyr Gly Gly Ala Glu Ala Leu Glu

 91 AGG ATG TTC CTG TCC TTC CCC ACC ACC AAG ACC TAC TTC CCG CAC 135
 Arg Met Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His

 136 TTC GAC CTG AGC CAC GGC TCT GGC CAG GTT AAG GGC CAC GGC AAG 180
 Phe Asp Leu Ser His Gly Ser Ala Gln Val Val Lys Gly His Gly Lys

 181 AAG GTG GGC GAC GCG CTG ACC AAC GGC GTG GCG CAC GTG GAC 225
 Lys Val Ala Asp Ala Leu Thr Thr Asn Ala Val Ala His Val Asp Asp

 226 ATG CCC AAC GCG CTG TCC GCG GTC AAC TTC AAG GAC CTG CAC GCG CAC AAG 270
 Met Pro Asn Ala Leu Ser Ala Leu Ser Asp Leu His Ala His Lys

 271 CTT CCG GTG GAC CCG GTC AAC TTC AAG CTC CTA AGC CAC TGC CTG 315
 Leu Arg Val Asp Pro Val Val Asn Phe Lys Leu Leu Ser His Cys Leu

 316 CTG GTG ACC CTG GGC GGC CAC CTC CCC GCG GAG TTC ACC CCT GCG 360
 Leu Val Thr Thr Leu Ala Ala His Leu Pro Ala Glu Phe Thr Pro Ala

 361 GTG CAC GGC TCC CTG GAC AAG TTC CTG GCT TCT GTG AGC ACC GTG 405
 Val His Ala Ser Leu Asp Lys Phe Leu Ala Ser Val Ser Thr Val

 406 CTG ACC TCC AAA TAC CGT
 Leu Thr Ser Lys Tyr Arg

FIGURE 2

Beta globin sequence:

1 GTG CAC CTG ACT CCT GAG GAG AAG TCT GGC GTT ACT GGC CTG TGG 45
 Val His Leu Thr Pro Glu Glu Lys Ser Ala Val Thr Ala Leu Trp

 46 GGC AAG GTG AAC GTG GAT GAA GTT GGT GAG GGC CTG GGC AGG 90
 Gly Lys Val Asn Val Asp Glu Glu Val Gly Gly Glu Ala Leu Gly Arg

 91 CTG CTG GTT GTC TAC CCT TGG ACC CAG AGG TTC TTT GAG TCC TTT 135
 Leu Leu Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe

 136 GGG GAT CTG TCC ACT CCT GAT GCT GTT ATG GGC AAC CCT AAG GTG 180
 Gly Asp Leu Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val

 181 AAG GCT CAT GGC AAG AAA GTG CTC GGT GGC TTT AGT GAT GGC CTG 225
 Lys Ala His Gly Lys Lys Val Val Leu Gly Ala Phe Ser Asp Gly Leu

 226 GCT CAC CTG GAC AAC CTC AAG GGC ACC TTT GGC ACA CTG AGT GAG 270
 Ala His Leu Asp Asn Leu Lys Lys Gly Thr Phe Ala Thr Leu Ser Glu

 271 CTG CAC TGT GAC AAG CTG CAC GTG GAT CCT GAG AAC TTC AGG CTC 315
 Leu His Cys Asp Lys Leu Leu His Val Asp Pro Glu Asn Phe Arg Leu

 316 CTG GGC AAC GTG CTG GTC TGT GTG CTG GGC CAT CAC TTT GGC AAA 360
 Leu Gly Asn Val Leu Val Val Cys Val Leu Ala His His Phe Gly Lys

 361 GAA TTC ACC CCA CCA GTG CAG GCT GGC TAT CAG AAA GTG GTG GCT 405
 Glu Phe Thr Pro Pro Val Gln Ala Ala Tyr Gln Lys Val Val Ala

 406 GGT GTG GCT AAT GGC CTA GGC CAC AAG TAT CAC
 Gly Val Ala Asn Ala Leu Ala His Lys Tyr His

FIGURE 3

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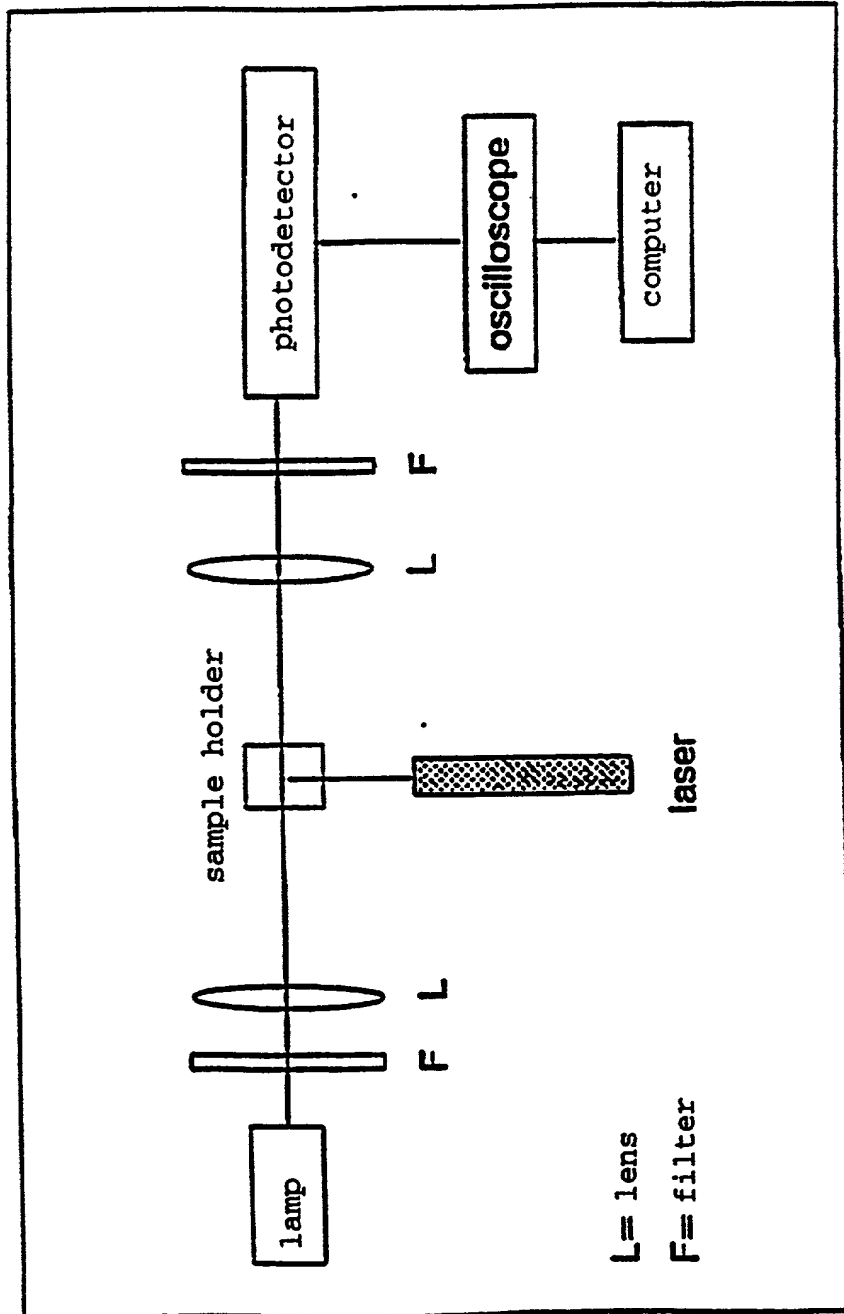


FIGURE 4

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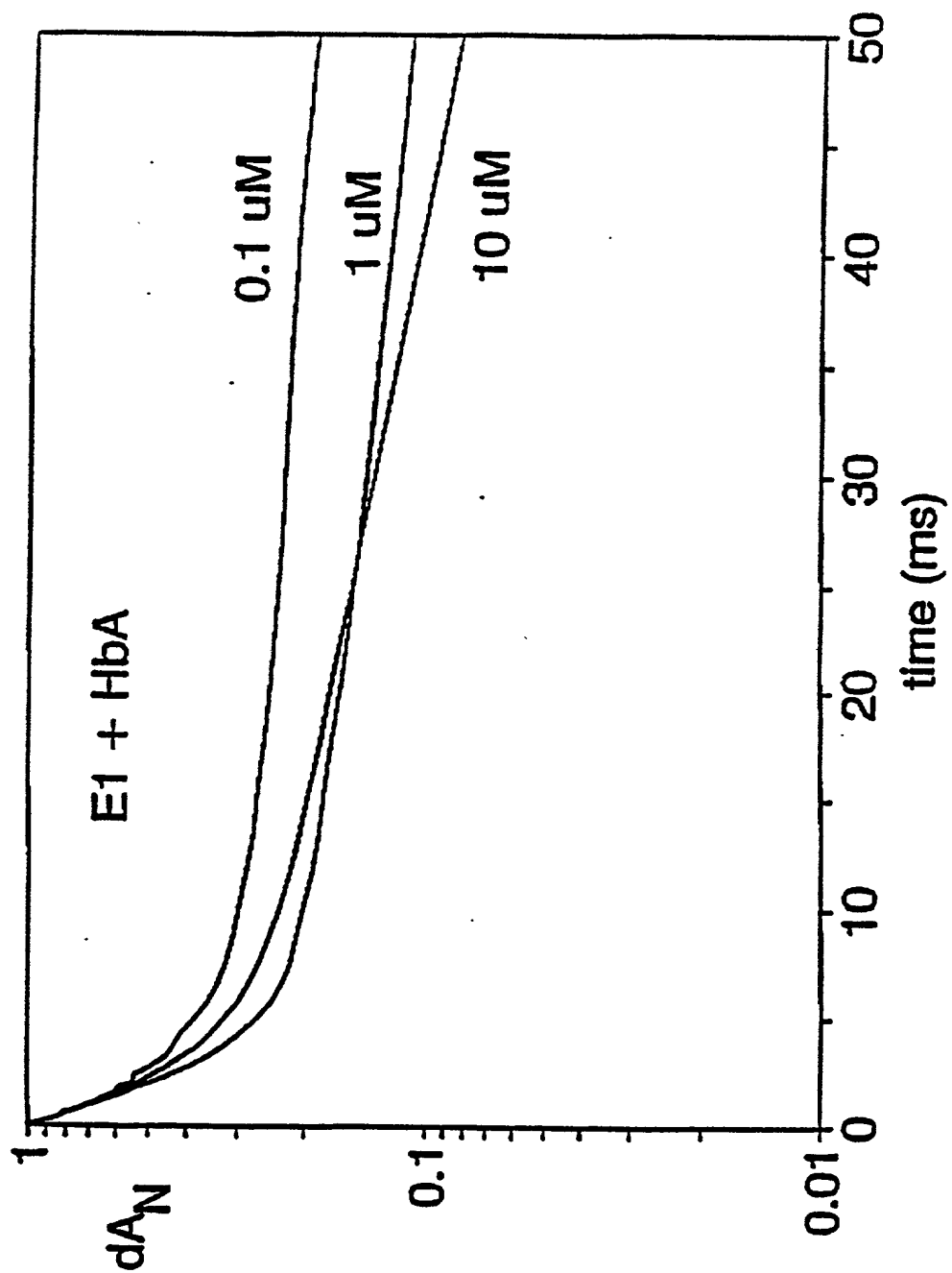


FIGURE 5

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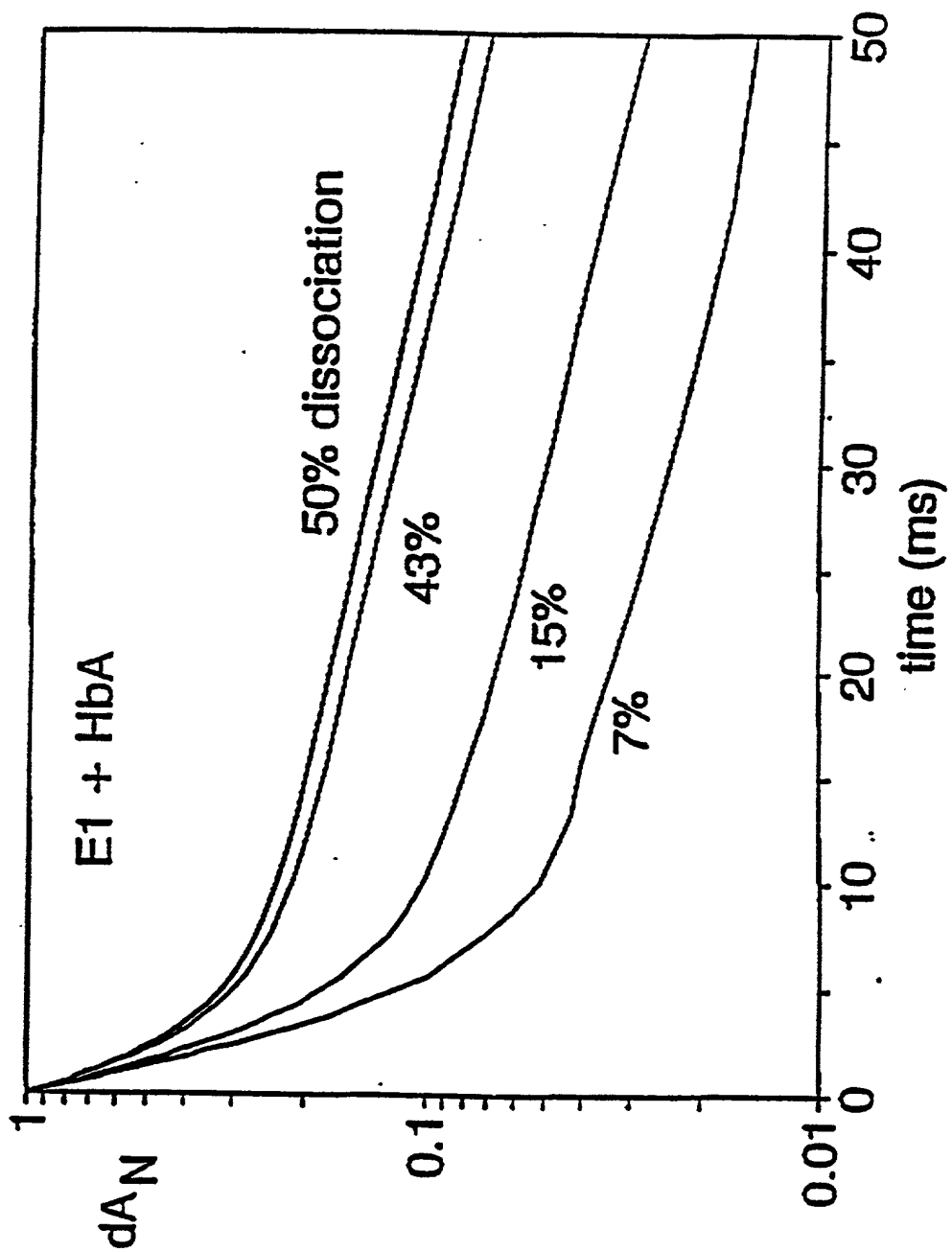


FIGURE 6

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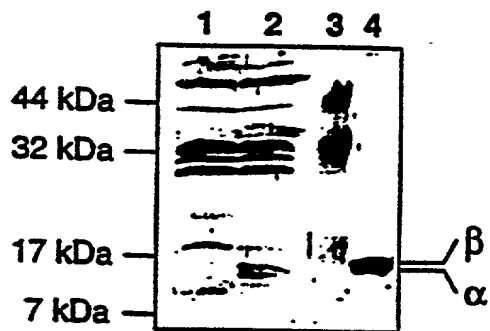


FIGURE 7

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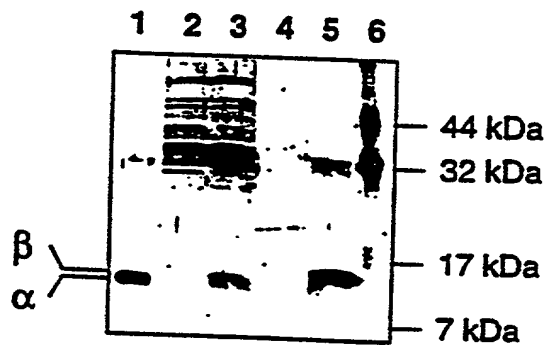


FIGURE 8

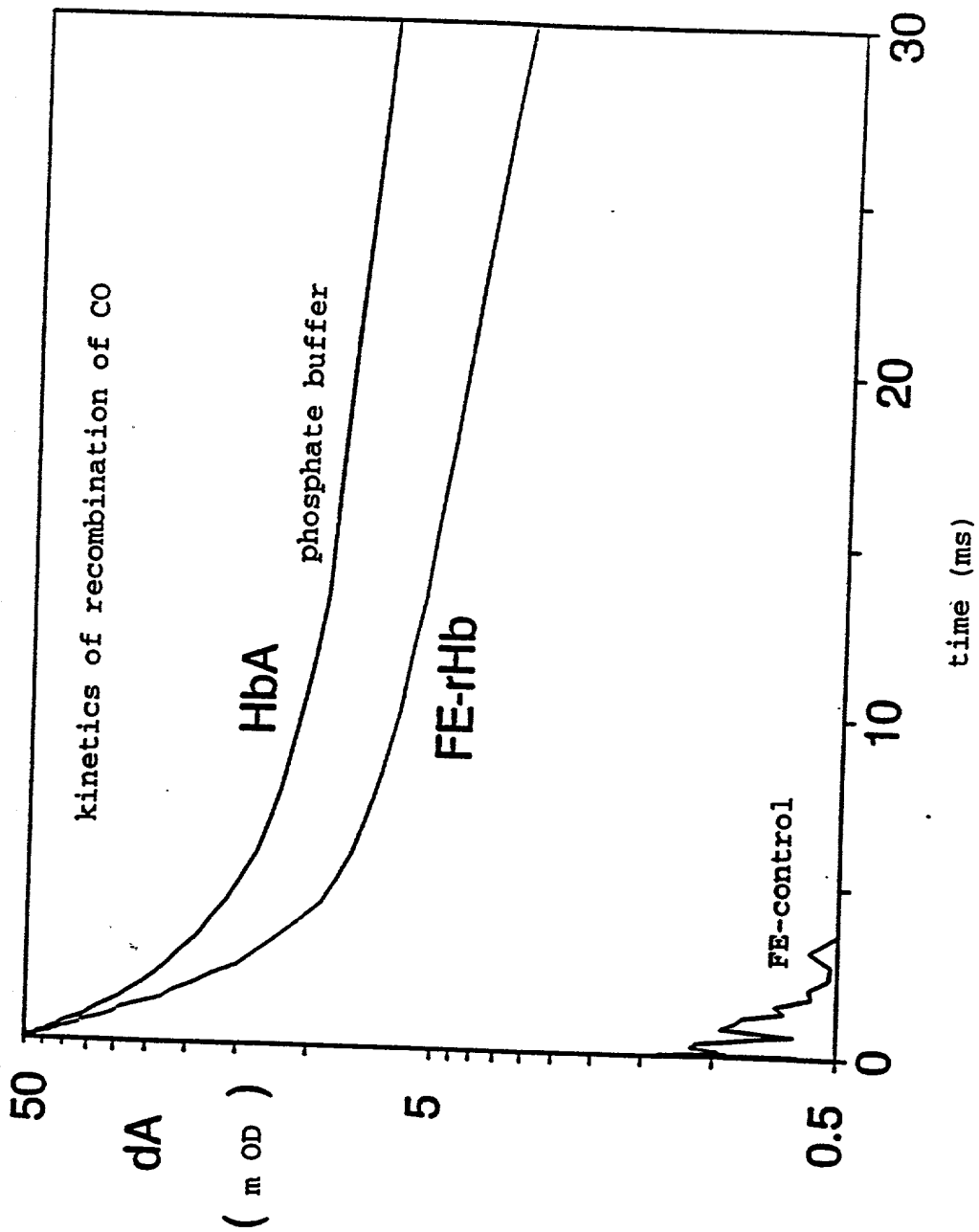


FIGURE 9

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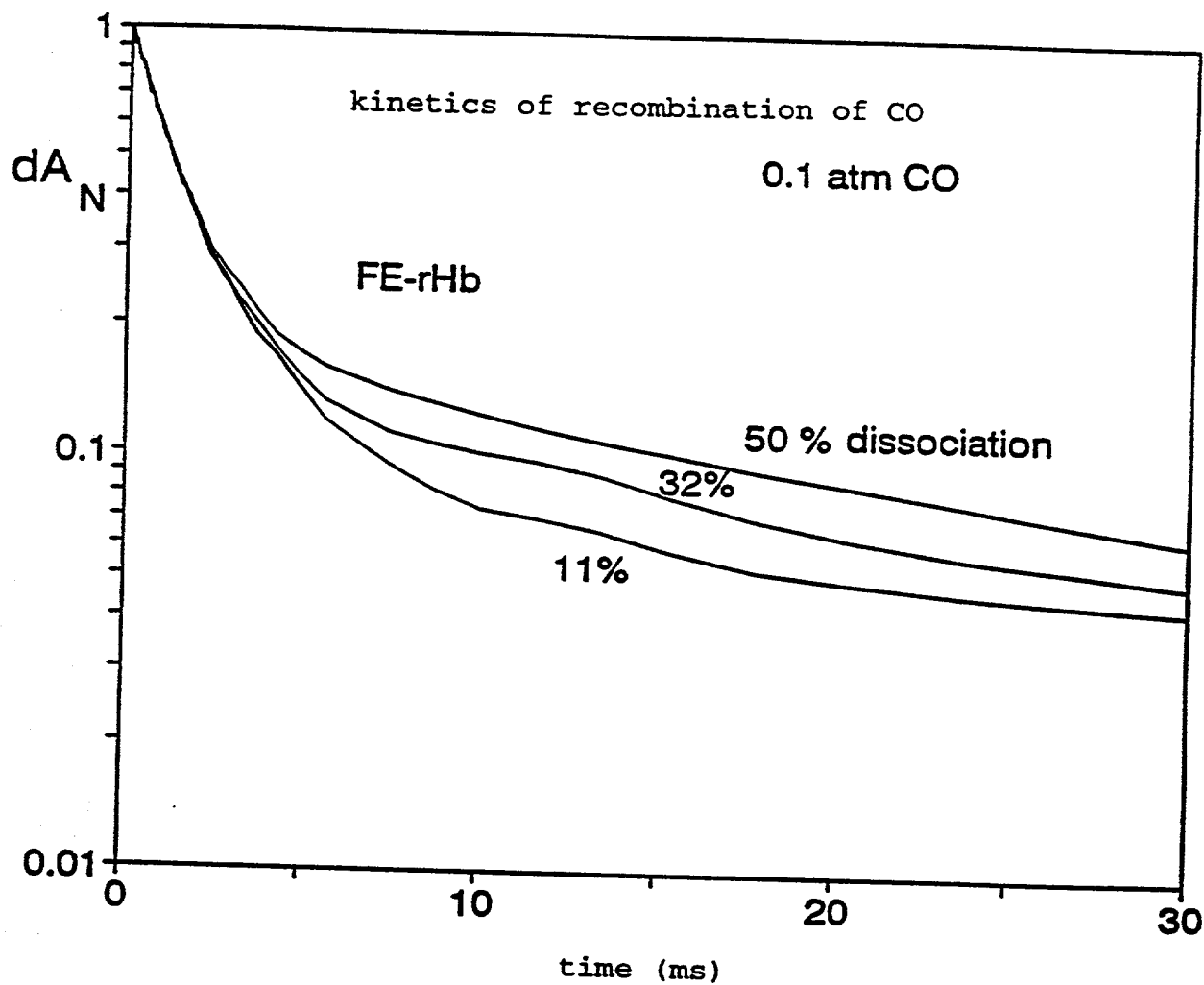


FIGURE 10

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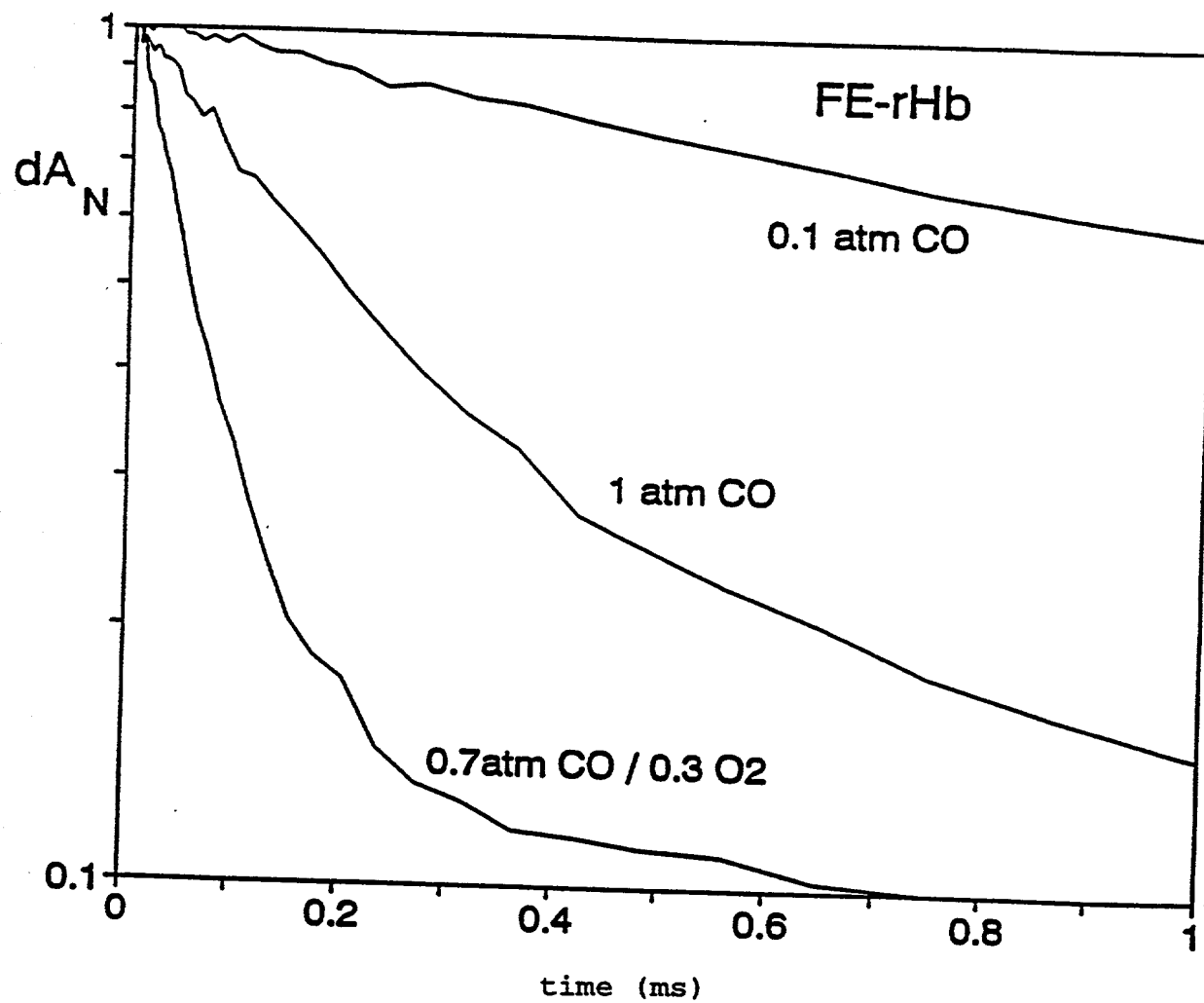


FIGURE 11